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THE

SEMI-ANNUAL.

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DEPARTMENT OF

WILSON ORNITHOLOGICAL

CHAPTER OF A. A.

MEMBERS OF THE WILSON ORNITHOLOGICAL CHAPTER OF A. A.

You have called me to fill the highest position to which it is in your power to call any one. I sincerely thank you for the honor you have thus bestowed upon me. You could easily have found a man of larger experience and better adaptation to the work in hand, but you could not have found one who loved it more and was more in sympathy with it and at once with yourselves.

When I look over the field and see how much is to be done, I feel the task far too great for me alone. Alone I must fail. I accept the position only on condition that you, the members of the organization, do not leave me to direct it alone. It is not mine, it is yours, for you have called me to it. What we shall learn is not for me, it is for you. I am here that you may work with less friction and accomplish more; that the results of your

united work may come to you in form to study; that you may gain the benefit of a wider field of investigation than one alone could compass.

You will shape the course of our voyage: I shall simply direct the ship towards the port.

Many of you have expressed the desire to continue the committees which have in charge special lines of work. That seems the best course at present. In addition we shall have a course of general study for those who contribute to no one of the several committees. Many have expressed the desire to study the FRINGILLIDAE the coming season. If it is the general wish we shall be glad to study that group. Indeed, I am inclined to think that this group would gain greater interest than any other on account of its size and wide extent. This does not mean that the special committees shall study this group. They have the privilege of investigating any group, genera, or species they can to the best advantage, following out the special line in view; accomplishing but a single thing if that seems best to the committee.

Let us all unitedly lend our aid in our own way to the furtherance of our organization and the advancement of our favorite science. Each having a part in the work, each adding his part, be that small or great in his eyes—for without each brick the building cannot be erected—to the work in hand.

Cordialy and faithfully yours,

LYNDS JONES.

REPORT OF THE SECRETARY OF THE WILSON ORNITHOLOGICAL CHAPTER FOR THE YEAR ENDING DEC. 5, 1890.

The growth of our Chapter has been steady, though not rapid. Early in the year it was decided by a vote of all the members to establish a constitution which should embrace two classes of members, instead of one as heretofore. These classes to be known as Active and Associate members, respectively.

Time was given for all those who desired to become Active members to send their dues, which were fixed at one dollar, ($1) to the Secretary. Sixteen names were enrolled on the list of Active members. Many more expressed their desire to become Active members, but for some reason failed to forward their dues

According to a clause in the changed constitution, all Active members shall receive free all publications of the organization. Associate members, not being subject to a fee, are not entitled to the publications free of charge.

With the close of the year our roll shows a membership of 16 Active members, as above stated, and 75 Associate members. Not a few of our Associate members are only waiting for election to occur when they will become Active members, while several not yet members at all wish to join our ranks. The outlook is indeed bright.

The committees having special lines of work in charge are pushing their work with vigor, accomplishing valuable results and with the Semi-Annual to print their notes and encourage all to better work by its bright face, they will bring us reports that we can point to with pride. Mr. C. C. Maxfield, who now has sole control of the magazine, will push the work of editing the paper with renewed vigor. He needs no introduction.

Our finances are in good condition as shown by the report which appears elsewhere in this issue. We have nothing to fear, but much to hope for and look forward to with the surety of success. All are willing and eager to work and love our favorite science. Let us be up and doing with the determination to bring before our fellow laborers results of our investigations, which shall show our earnestness and our pains-taking, constant work. Our science has not been studied to exhaustion, but rather is in its extreme infancy.

Yours in the work,

LYNDS JONES, Sec'y.

ELECTION OF OFFICERS, NOV., 1890.

For President, Secretary and three members of Executive Council. Members entitled to vote 15. Voting 11.

FOR PRESIDENT.

Lynds Jones,	9
J. B. Richards,	1

FOR SECRETARY.

J. Warren Jacobs,	6
Frank L. Burns,	3
Lynds Jones,	1
C. C. Maxfield,	1

EXECUTIVE COUNCIL.

C. C. Maxfield,	4
Frank L. Burns,	4
John H. Sage,	3
J. Warren Jacobs,	4
J. A Donald,	1
I. C. Green,	1
Chas. A. Ely,	1
Mary D. Hussay,	1
J. M. Keck,	1
R. M. Strong.	1

Mr. Frank L. Burns, who has the election in charge, has forwarded me the above with each original ballot cast. I find his figures correct.

L. JONES, Secretary.

TREASURER'S REPORT.

REPORT OF THE CONDITION OF THE TREASURY UP TO MARCH 1, '91.

RECEIPTS.

Assessment for 1890 from fifteen Active members	$15.00
" 1891 " three " "	3.00
Total receipts,	$18.00

EXPENDITURES.

15 copies of July, 1890, issue of Semi-Annual	$3.75
17 " " April, 1891, " " "	4.25
Total expenditures,	$8.00
Balance in treasury,	$10.00

LYNDS JONES, Acting Treasurer.

OFFICERS OF THE WILSON ORNITHOLOGICAL CHAPTER, 1890-91.

President.—Mr. Lynds Jones, 5 Elm St., Oberlin, Ohio.

Secretary.—Mr. J. Warren Jacobs, Waynesburg, Pa.

EXECUTIVE COMMITTEE.

Mr. Frank L. Burns, Berwyn, Pa.
Mr. John H. Sage, Portland, Conn.
Mr. C. Cornelle Maxfield, Box 224, Danbury, Conn.

COMMITTEES OF WILSON ORNITHOLOGICAL CHAPTER, 1890-91.

CHAIRMAN MIGRATION.

Mr. Lynds Jones, 5 Elm St., Oberlin, Ohio.

CHAIRMAN MELOLOGICAL.

Mr. John H. Sage, Portland, Conn.

CHAIRMAN OOLOGICAL.

Mr. Frank L. Burns, Berwyn, Pa.

CHAIRMEN GENERAL COMMITTEE.

Mr. R. M. Strong, Box 144, Wauwatosa, Wis.
Mr. Chas. A. Ely, Perrineville, N. J.

ACTIVE MEMBERS OF WILSON ORNITHOLOGICAL CHAPTER.

Burns, Frank L.	Berwyn, Pa.
Clute, Willard N.	11 Jarvis St., Binghamton, N. Y.
Donald, John A.	Decatur, Texas.
Ely, Chas. A.	Perrineville, N. J.
Greene, I. C.	65 High St., Fitchburgh, Mass.
Howard, John M.	90 Auditor's office, Pac. Ex. Co., Omaha, Neb.
Hull, Walter B.	Box 47, Milwaukee, Wis.
Hussey, Miss Mary D.	East Orange, N. J.
Jacobs, J. Warren	Waynesburgh, Pa.
Jones, Lynds	5 Elm St., Oberlin, Ohio.
Keck, J. M., A. M.	Chardon, Ohio.
Maxfield, C. C.	Danbury, Conn.
Nehrling, H.	815 N. Ave., Milwaukee, Wis.
Pindar, L. Otley	Cynthiana, Ky.
Reed, Norris H.	515 Cut Ave., Nebraska Cty., Neb.
Richards, J. B.	Fall River, Mass.
Russell, Roy	Kokomo, Ind.
Sage, John H.	Portland, Conn.
Strong, Reuben M.	Box 144, Milwaukee, Wis.

ASSOCIATE MEMBERS OF WILSON ORNITHOLOGICAL CHAPTER.

Baldwin, Arthur	Amboy, Ind.
Baller, Miss M.	East Orange, N. J.
Barnes, Mrs. S. C.	Orange, N. J.
Beal. E. Irving	Bridgewater, Mass.
Bigney, A. J.	Moore's Hill, Ind.
Brass, Frank N.	Kokomo, Ind.
Brigham, S. Willard	East Prov. Centre. R. I.
Bowers, L. T.	Columbia, Pa.
Brown, J. H.	Grinnell, Iowa.
Bush, Geo. B.	Fall River, Mass.
Campbell, Robert	Hanover, N. H.
Cantwel', Geo. G.	Colorado Springs, Col.
Card, Fred.	Grinnell, Iowa.
Carlton. E. P.	Wauwatosa, Wis.
Carpenter, Allen	Milwaukee, Wis.
Chase, Walter	Hanover, N. H.
Carr, Chas. F.	126 State St., Madison, Wis.
Clark, J. N.	Meridian. Wis.
Clnte. O. C.	Keokuk, Iowa.
Colton, Will N.	Biddeford, Maine.
Cousins, Marshall	Eau Claire, Wis.
Cox, A. M.	Chicago, Ills.
Cram, Chas. E.	Burlington, Iowa.
Crosby, W. P.	Hanover, N. H.
Curtis, Fred. W.	Wauwatosa, Wis.
Davis, Miss Grace G.	Northampton, Mass.
Edwards, J. Lee	Marshallsville, Ga.
Estes, Francis T.	Fall River, Mass.
Everett, E. A.	Waseca, Minn.
Femholz. Eugene	Jefferson, Wis.
Fletcher, Robert	Hanover, N. H.
French, Lynward	Fall River, Mass.
Greene. C. W.	Portsmouth, N. H.
Grindell, A. B.	Plattsville, Wis.
Hager, A. R.	Chicago, Ills.
Hartzell, L. B.	Crystal Springs, Kan.
Haskell, C. B.	Kennebunk, Maine.
Hangor, O. P.	Orleans, Ind.
Hershey, Herbert E.	908 1st Ave., Nebraska Cty., Neb.
Holzinger, J. M.	Winona, Minn.
Homer, Arthur	Fall River, Mass.
Huffman, Sam. M.	Moore's Hill, Ind.

Hurd, H. B.	Minneapolis, Minn.
Johnson, Frank W.	Grinnell, Iowa.
Jones, C. A.	Chicago, Ills.
Kittridge, Edward L.	Milford, N. H.
Lewis, John B.	Eubanks, Ky.
Marble, J. E.	441 Thayer St., Ann Arbor, Mich.
Martin, E. W.	Medina, Ohio.
Maxfield, Mrs. C. C.	Danbury, Conn.
McElfresh, Fred.	Jacksonville, Ills.
Miller, Will A. Jr.	Decatur, Texas.
Neal, M. W.	441 Thayer St., Ann Arbor, Mich.
Oldright, Chas. D.	Austin, Texas.
Peck, E. B.	Clifton Springs, N. Y.
Pierson, Miss Carrie A.	East Orange, N. J.
Plank, Will H.	Kansas Cty., Kan.
Poindexter, F. C.	Wash. Co., Bartle, Ind.
Remington, H. V. S.	Fall River, Mass.
Richards, L. D.	Kirkwood, Wis.
Richardson, Walter L.	Pasadena, Cal.
Rogers, Geo. H.	Milwaukee, Wis.
Sanford, Samuel	Fall River, Mass.
Sayers, Lewis	Waynesburg, Pa.
Shaw, Hubert G.	Fall River, Mass.
Sherman, Maurice S.	Hanover, N. H.
Smith, Thom.	Portland, Mich.
Smith, W. G.	1338 Ohio St., Lawrence, Kan.
Smithwick, J. W. P.	Sans Souci, N. C.
Taylor, B. F.	Box 292, Columbia, S. C.
Vayhinger, Monroe	Moore's Hill, Ind.
Washburn, Percy C.	Malden, Mass.
Wethern, H. P. T.	West Farmington, Maine.
Willard, Will A.	Grinnell, Iowa.
Zimmerman, Chas.	Amboy, Ind.

REPORT OF THE OOLOGICAL COMMITTEE OF THE WILSON ORNITHOLOGICAL CHAPTER.

It is with no small degree of pleasure and satisfaction that this, the first report of the Oological Committee, is submitted to you. Our course has hardly been more than an experiment, but a very successful one in showing what can be done by the untied efforts of earnest, interested members. What we have done is not great in itself, but it is a germ from which may yet spring a tree whose yearly leaves shall unfold to us what we so earnestly seek.

Much can be done and much will be done under an organized leadership. The members have shown a willingness amounting to eagerness, to do the work, waiting only to be given direction. Next year will bring before us a report which will be preserved as a contribution to American Ornithology.

I wish to heartily thank those upon whom I have called to aid me in this work, for their prompt, earnest, energetic efforts. This report is the united result of the work of Messrs. Frank L. Burns, Berwyn, Chester Co., Pa., Chas. A. Ely, Perrineville, N. J., J. Warren Jacobs, Pittsburg, Pa., Lionel T. Bowers, Columbia, Pa. and Reuben M. Strong, Wauwatosa, Wis.

It was the original plan of the Committee to limit its scope to the Thrushes proper, believing that with a species much more efficient work could be done than with many. The A. O. U. nomenclature was adopted, thus greatly limiting the field, but as each report contains notes on the Brown Thrasher and Catbird, that nomenclature was disregarded in the report in which appear the two species mentioned. About half of the reports contain notes on Bluebird and one or two upon the Warblers. As this report depends upon comparison of notes for its chief value these additional notes will appear in a separate general report, not entering into the report proper.

In working over the notes I have compared our own work on measurements with that of those who are considered authority, considering it of sufficient interest to pay for the trouble and space. I have, also, gone a little beyond the limits of this report in order to show the relation of the arrival of a species to its nesting.

It was the original intention of the Committee to group the topics to be considered under six heads: Topography, Climatic Conditions, Nesting, Eggs in Set, Coloration, Measurements. In working over the notes the main topics have been reduced to three: Topography, Climatic Conditions, Nesting; all others being reduced to sub-topics under Nesting for greater clearness. Other sub-topics have been introduced as necessity gave occasion.

It has not seemed best, nor hardly possible, to group the different species together, but instead the observers have been grouped under "NESTING." I trust they will not feel in the least slighted!

Let us now turn to the systematic report.

TOPOGRAPHY.

Berwyn, Chester Co., Pa.

A succession of hills and narrow valleys; covered in part with timber of a mixed growth, chestnut predominating; all land not wooded is under cultivation. Well watered by small streams.

FRANK L. BURNS.

Perrineville, N. J.

Alternate hills and valleys; valleys covered with a thick growth of small bushes; hills with woods of oak, chestnut and pine. Cultivated portions contain large orchards of pear, apple and peach.

CHAS. A. ELY.

Wauwatosa, Milwaukee Co., Wis.

Hilly and rolling, especially along streams. Many streams, swamps and small lakes. Timber: maple, oak, hickory, willow, elm, ash, beech, tamarack and others. Wild land, 4 per ct.; pasture, 5 per ct.; proportion to cleared, 10 per ct. Thorn trees and bushes in abundance along streams. Nesting sites: grassland 50 per ct.; cultivated, 35 per ct; timbered, 10 per ct.; orchards, 5 per ct.

REUBEN M. STRONG.

Grinnell, E. Jasper, W. Poweshick Cos., Iowa.

Primarily rolling prairie, sparsely timbered along the streams with hard woods and lindens, poplars, cottonwoods and a few maples, with under brush in abundance. Many isolated patches

of small brush: willow and osage-orange hedges along most roads and in many fields. Few and small streams. Proportional lands: under cultivation, 25 per ct.; pasture, 25 per ct.; meadow, 20 per ct.; woods—also pastured—10 per ct.; isolated brush—also pastured—5 per ct.; wild prairie, 5 per ct.: artificial groves 5 per ct.: hedges, 5 per ct. Equally used for nesting.

LYNDS JONES.

CLIMATIC CONDITIONS.

That the seasons very materially affect nesting no one can fail to see. In the earliest history of bird-life as the seasons grew out of perpetual tropical climate, the birds must have selected the time best suited to the propagation of their kind to build their nests and rear their young. As the seasons emerged, from what cause we do not care to argue, the most fitting time was selected.

Clearly that time could not have been in the full heat of what is now our Summer, nor yet in what now is Winter, since these seasons have nothing of that which gives buoyancy to life, which quickens the pulse and starts anew the flagging powers. For this office, birds as well as all other life, require the time when their life is most full, most vigorous, when there is most life in them. Spring is the awakening, the invigorating, the life-giving season. Certainly their selection of the season is a most natural one.

But early and late seasons, cold and warm, play no unimportant part in their nesting. Let it be observed that it is the old birds, and those which have passed the Winter nearest by, that nest first. They nest as soon as the weather is fit. As cold storms are more frequent early than late in Spring, the earlier birds will be most affected by the weather, as a matter of course. After a cold storm abandoned nests of the Robin have been found, half finished, thus deferring the nesting season days perhaps. Even when the nest is not abandoned the birds partly or entirely suspend work until the weather brightens. It is harder to find food in bad weather as the birds cannot work so long nor so well.

The question has been asked, "Does the time of year or weather effect the composition or workmanship of the nest?" The reports throw no light upon the effect of weather, upon the composition or workmanship, but there is some evidence that the

time of year does so affect the nest. The tendency seems to be to make better and warmer nests early in the season. It is only the early birds that are appreciably affected.

In the following report it will be seen that all of the birds in this group lay daily. It would perhaps be wiser to say that this is the normal condition of things. Bad weather may, often does, cause a longer or shorter suspension in laying. I have seen instances where a Robin had a nest with one or two eggs which a hard storm caused her to abandon. She built another nest and raised her brood. I am not prepared to say that she did not drop another egg, or perhaps two, during the interval, but it seems highly improbable.

Even setting birds and those with young in the nest are sometimes driven to the choice of abandoning their treasures, or perishing with them, in long continued storms. Many instances have been recorded of finding nests with addled eggs and with dead young, the mother having abandoned them or perished.

Late sets are smaller than early ones, especially of Robin and Wood Thrush. This would seem to show that storms affect the number of eggs laid very little, if at all, if it is true, as we have said, that storms are more frequent and more severe early in the season than later.

"Does the time of year affect the color or markings of eggs?" There is no evidence at hand one way or the other. It would seem that late sets would be paler because the powers of the birds are becoming exhausted; assuming that the late sets are the second or third in the case of birds that make more than one brood, and that those which do not, have been robbed or their first set destroyed so that they made a second. But the element of age must, also, be reckoned in. Assuming that the powers of the old birds are waning, and as it is, they, rather than the birds of the year before, which make more than one brood, and it is they which make the first brood, we might suppose that the first and last eggs, or sets, would be palest, the last most. I am not stating anything, let it be understood, but only asking questions for those who shall work the coming season to answer.

I will but state the question, "Do eggs vary in size or shape at different seasons?" The reports furnish no evidence with

which to answer. Let it be further studied.

From the foregoing summary of notes it will be seen that if much that is new is to be learned, eggs and nests must be examined and studied with reference to the seasons and weather. None of the questions are satisfactorily answered in any work on ornithology, nor will they be until a number of pains-taking observers band themselves together in a way like our Committee, and work with a purpose and will. Why may not we solve these problems and carry off whatever honor attaches to the deed.

NESTING.

704—Catbird, *Galeoscoptes carolinensis*.

SITUATION OF NEST.

Of the 47 nests examined by Mr. Burns, at Berwyn, Pa., 27 were in briars, 18 in upright fork of a sapling or tree, 2 out on a branch of a tree; 34 were close to water, 13 some distance from water; 43 in thickets, 4 close to dwellings; highest 8 feet, lowest 2 feet; averaging 4 feet.

Mr. Ely, at Perrineville, N. J., has found the largest number in briars and thickets. He mentions one found in the fork of an apple tree as a very unusual situation.

Mr. Bowers, at Columbia, Pa., examined 3 nests, all of which were in blackberry bushes, 4 to 5 feet up.

Mr. Jacobs, at Pittsburgh, Pa., finds a large majority of nests in clumps of briars in neglected fields. He also speaks of one "placed among the overhanging roots on the bank of a stream and another in the top of a water elm, fifteen feet up." This is very unusual. Normal height 3 feet.

Mr. Strong, at Wauwatosa, Wis., says, "Nests are in low bushes, etc., near the ground, in thickets and secluded places."

At Grinnell, Iowa, upwards of a hundred nests have been examined; one was in a lilac bush 20 rods from a dwelling, all the rest in briars, thorn-trees or thick brush. Occasionally nests are found in shade trees in town, but never in evergreen or any such tree. It is almost true that "where there is a gooseberry bush there you may find a Catbird's nest." Thorn trees come in next in preference. Here where there is so little water, nests are indifferently near or remote from water. The highest nest was 6 feet, lowest 1 1-2 feet, average 3 feet.

COMPOSITION OF NEST.

All agree in most points, respecting the composition of the Catbird's nest. First there is a layer of sticks through which protrude—usually below—some light colored fine grass, covered above with bark, then leaves and weeds and lined with dark colored rootlets. At Berwyn, Pa., grape-vine or cedar bark is used. There, "nests differ only in the quantity of certain of the above named materials used." Mr. Burns found one nest, in a yard, with about 3 feet of white satin ribbon festooned about it. In Iowa, where there is no cedar, the bark of the American linden is used.

DIMENSIONS AND WEIGHT OF NEST.

	DIAM.		DEPTH.		
	Outside.	Inside.	Outside.	Inside.	Weight.
Berwyn, Pa.,	4.00 to 6.00	2.50 to 3.00	2.00 to 3.00	1.00 to 1.50	.50 to 1.50 oz.
Columbia, Pa.,	6.00	2.75	5.50	2.75	
Grinnell, Iowa,	3.75 to 7.00	2.30 to 2.90	3.00 to 6.00	1.50 to 2.00	

	DATE OF NESTING.				ARRIVAL.	
	First.	Last.	Av.	Time Building.	First	Common.
Berwyn, Pa..	5-25	6-26	6-6		5-9	
Columbia, Pa.,	5-18	6-10		5-6 days		
Perrineville, N. J.	6-2(?)		6-10	5-6 days		
Pittsburgh, Pa.,	5-13	7-15	5-30		5-1	5-10
Wauwatosa, Wis.	5-15	8-1				
Grinnell, Iowa.	5-20	7-8	6-1	5-10 days	5-3	5-4

	EGGS IN SET.			MEASUREMENTS.		
	Largest.	Smallest.	Av.	Largest	Smallest.	Average.
Berwyn, Pa.,	5	2	4	.68x1.05	.68x.60	.64x.72
Columbia, Pa.,						
Perrineville, N. J.,			4			.69x.98
Pittsburgh, Pa.,	5	2	4			
Wauwatosa, Wis.,	5	3	4	.79x.96	.65x.84	.68x.90
Grinnell, Iowa.,	5	3	4	.71x.96	.62x.85	.67x.88

In form, eggs of Catbird range from elliptical ovate, through ovate to pyriform; the last form is rare. The variation in size and shape is very marked.

COLORATION.

The reports show a remarkable agreement in giving the color of eggs. The universal report is, "A uniform bluish-green, frequently fading to a greenish-blue." In notes on a large series of sets I have described them as a uniform dark nile-blue. Fresh eggs usuall have a limy deposit tending to appear in streaks; this is easily washed off.

PERIOD OF INCUBATION, ETC.

Berwyn, Pa.	Lays each day.	14 days hatching.	Young left in 12 days
Perrineville, N. J.	" " "	12 to 13 " " "	" " " " "
Grinnell, Iowa.	" "	14 " " "	" " " 14 "

We have learned that the Catbird is a seclusive bird, preferring underbrush and thickets to places near human habitations. That he places his nest about 3 or 4 feet from the ground, building it into the twigs and stems of the bush or tree, or rarely piling his brush into the forks. That he prefers to be where he can easily and quickly "wet his whistle and awake the woodland echoes." We might have said, too, that he is a sturdy warrior when his home is assailed by squirrel, or mouse, or snake, or man. Very rarely is he imposed upon by any parasite; Mr. Burns being the only one who reports such a thing; he found an egg of Cardinal in one nest.

We have also learned that though his nest is rough and brushy outside, it is snug and neat within. That the eggs are of a nearly uniform color the country through, and about four in number, very rarely six. That his nest is soon made and that no time is lost after his arrival.

Brown Thrasher, *Harporhynchus rufus.*

SITUATION OF NEST.

We do not seem to agree on the nest of this Thrasher so well as we did on that of Catbird. It is the bird's fault.
At Berwyn, Pa., Brown Thrasher builds in almost any kind of shrubbery, without a preference for any. 4 nests were close to water, 3 remote from it; 5 were in thickets, 2 in cultivated fields; lowest 2 feet, highest 8 feet, average 4 feet. It is the same at Columbia, Pa. and Perrineville, N. J.

At Pittsburgh, Pa., "nests are placed in briars, bushes, shrubbery, trees, bush-heaps and on the ground in fence corners, along the borders of woods and in neglected fields." Highest 8 feet, average 3 feet.

At Wauwatosa, Wis., nests may be found in out of the way places, in bushes and shrubbery, thickets being preferred; often on the ground: highest 20 feet, average 3 feet.

At Grinnell, Iowa, nests in the woods are in the shrubbery and bushes, preferably thorn trees. The great majority of nests are in the osage-orange hedges along roads and in fields; here nests are made in old loppings, 2 to 3 1-2 feet up. The proportion of nests in hedges and in woods is 20 to 1. Nests are rarely placed on the ground, never out of the woods. Highest 6 feet, average 3 1-2 feet; usually remote from water.

COMPOSITION OF NEST.

The nest is made outwardly of twigs, usually forming a broad bristling platform, upon which weeds, strips of bark, dead leaves and grass are arranged; the lining is of black rootlets. Nests are frequently without twigs or bark.

DIMENSIONS AND WEIGHT OF NEST.

	DIAM.		DEPTH.		
	Outside.	Inside.	Outside.	Inside.	Weight.
Pittsburgh, Pa.					
Wauwatosa, Wis.		4.00		2.50	
Grinnell, Iowa.	5.00 to 9.00	2.75 to 3.50	3.00 to 3.50	1.25 to 2.00	
Berwyn, Pa.	5.00 to 6.00	2.75 to 3.50	2.50 to 3.00	1.50 to 1.25	.75 to 2.00 oz

Nests are very variable in external measurements according to situation, sometimes sprawling, sometimes compact.

	DATE OF NESTING.				ARRIVAL.	
	First.	Last.	Average.	Time Building.	First.	Common
Berwyn, Pa.	5-25	6-18	6 3		5-9	
Columbia, Pa.	5-14		2-25			
Perrineville, N. J.	"Nesting begins last of May"			4-5 days	5-1	
Pittsburgh, Pa.	4-25	6-15	5-10			
Wauwatosa, Wis.	5 5	July				
Grinnell, Iowa.	5-10	6-20	5-20	6 to 8 days	4-12	4-28

In six years' work Mr. Burns says that the earliest date of nesting was May 13, latest June 26, average June 10.

	EGGS IN SET.			MEASUREMENTS.		
	Largest.	Smallest.	Av.	Largest.	Smallest.	Average.
Berwyn, Pa.	4	3	4	1.10x.80	1.05x.75	1.06x.79
Pittsburgh, Pa.	4	3	4			1.10x.98
Perrineville, N. J.	5	3	4			1.07x.81
Wauwatosa, Wis.	6	3	4	1.13x.81	.96x.75	1.04x.78
Grinnell, Iowa.	5	3	4	1.08x.84	1.02x.74	1.05x.80

It is unnecessary to say that 6 eggs is a rare set; even 5 is by no means common. The average is uniform throughout. The measurements are too irregular to be of value. Evidently the "personal equation" has largely entered into the computation. In this connection I am constrained to give the average measurements of a few of our authorities for a comparison; I will not give the names: 1.00x.75; 1.05x.78; 1.06x.78; 1.05x.80; 1.05x .81; 1.05x.82; 1.08x.80. After all we do not disagree more than our professional brethren.

In form, eggs vary from ovate to elongate ovate.

COLORATION.

All agree that the eggs of the Thrasher are of a plain light-gray, often with a slight greenish tinge, thickly spotted and dotted and sparingly blotched with wood-brown and lavender shell markings; these markings are often thickest on the larger end, where they frequently congregate in a ring or become confluent in a great blotch. Sometimes the eggs are sparingly marked with no aggregation or local clouding. Mr. Strong says: "Some eggs lack the markings and are a plain brownish-gray."

The period of incubation is about 14 days and the eggs are laid daily if the weather is fair.

We find Brown Thrasher more sociable, as often seeking the society of man as secluding himself in the woods; he can hardly be called a deep woods bird, seldom being seen there. He does not altogether waste the sweetness of his beautiful song on the desert air, but pours forth the liquid, bubbling notes where all who choose may hear.

There is no bird of his size who will more vehemently attack an intruder, or sit so closely when disturbed. Like the Catbird, his nest is soon made, but always neatly within.

Wood Thrush, *Hylocichla mustelina*.

SIUATION OF NEST.

In Pennsylvania and New Jersey the Wood Thrush prefers chestnut, beech, dogwood, maple, cedar, laurel and spice-wood in the order given, though small shrubs and bushes are sometimes used. In Wisconsin and Iowa, oaks are decidedly the preference, shrubs and bushes are not commonly used.

All agree that the upright crotch is the usual place for a nest. Mr. Burns says that of 58 nests examined, 53 were placed in upright forks of saplings, 3 out on branches of trees, 2 in briar tangles; nest always in a thicket. In Iowa a larger proportion are on horizontal branches. I have found nests saddled on a drooping grape-vine which the wind rocked almost constantly.

There is much variation in height of Wood Thrush's nest. At Berwyn, Pa., the highest was 12 feet, lowest 1 foot, average 6 feet; at Columbia, Pa., highest 17 feet, lowest 3 feet, average 8 feet; at Pittsburgh, Pa., highest 15 feet, lowest 3 feet, average 6 feet; at Grinnell, Iowa, highest 20 feet, lowest 2 feet, average 6 feet; at Wauwatosa, Wis., highest 30 feet.

At Berwyn, Pa., 40 nests were on hill sides, 18 close to water; at Perrineville, N. J., "the nest is in thickly wooded tracts;" at Pittsburgh, Pa., "Wood Thrush is found in damp woodlands and sparingly distributed over groves and dry leafy woods;" at Grinnell, Iowa, the dark deep woods are preferred without reference to nearness to water; nests are the most common on dark, shady uplands. Wood Thrush also nests not uncommonly in deep shady places in city, often very near occupied houses.

COMPOSITION OF NEST.

In Pennsylvania and New Jersey the nest is made of "dead chestnut and oak leaves appearing as if placed together in a humid condition; upon these are arranged weeds, grass and mud, all thickly lined with black rootlets, with rarely a few dead twigs in the outer structure, and a little grass on the inside.

Mr. Burns found a nest containing much tissue paper and circulars hanging from the nest in strips.

In Iowa the nests are universally made outwardly of dead oak and hickory leaves, with some fine, almost white, dry grass hanging down; weed stalks and long coarse grass show through the leaves, within them there is a thick layer of punk formed into a welt, almost like felt, inside of this there is a thin layer of black rootlets, rarely thick enough to conceal the punk, with never any grass. I have never found a Wood Thrush's nest with mud in it. Either punk of a greyish color, or old horse droppings are used, rarely the latter. I am aware that I may call

down a storm of dissent by insisting that the Wood Thrush in Iowa, at least central Iowa, never use mud in making their nests. Brewer, Baird, Coues, Ridgway, Davie and all the rest find Wood Thrushes which use mud, but I cannot. They must dissent with my birds, not with me. The question arises, "is this difference local or is it a western characteristic?" There seems to be no logical reason why the Wood Thrush in Iowa should use punk and not mud, when its eastern brothers and sisters use only mud. Here is a nut for our workers to crack.

DIMENSIONS AND WEIGHT OF NEST.*

	DIAM.		DEPTH.		
	Outside.	Inside.	Outside.	Inside.	Weight.
Berwyn, Pa.	4.00 to 4.50	2.75 to 3.25	2.50 to 3.50	1.75 to 2.25	2.00 to 5.00 oz
Columbia, Pa.	3.50	2.75	4.00	2.50	½ lb
Wauwatosa, Wis.	5.00	3.50	3.00	2.50	
Grinnell, Iowa.	4.00 to 4.75	2.75 to 3.25	2.50 to 3.75	1.75 to 2.15	

The variation in size is small compared to either of the foregoing species; the nest is much more compactly made.

	DATE OF NESTING.				ARRIVAL.	
	First.	Last.	Average.	Time Building.	First.	Common
Berwyn, Pa.	5-25	7-9	6-10		4-11	
Columbia, Pa.	5-27	7-10				
Pittsburgh, Pa.	5-11	6-17			4 6	4-25
Perrineville, N. J.	5-10	7-1		6-7 days		
Grinnell, Iowa.	5-22	7-17	6-1	10 days	5-1	5-10

	EGGS IN SET			MEASUREMENTS.		
	Largest.	Smallest.	Av.	Largest.	Smallest.	Average.
Berwyn, Pa.	4	1	3	1.11x.77	.95x.67	1.01x.74
Pittsburgh, Pa.	4	2	3			1.02x.76
Wauwatosa, Wis.	5	2	4			
Grinnell, Iowa.	4	2	3	1.11x.75	.96x.72	1.01x.74
Perrineville, N. J.						1.00x.75

In the average measurements we very closely agree, much more so than the professionals whose records are as follows: 1.00 to 1.10x.70; .95x.65; 1.04x.72; 1.00x.75; 1.02x.74; 1.08 x.70. They show a very great diversity in form as well as size. One author—.95x.65—gives the average even smaller than the smallest in the table above. In their reckoning compare the long egg—1.10x.70—with the shortest—1.00x.75—and then ask how can authors differ so widely in average measurements. In form, eggs are very diversified; from short ovate they run through ovate pyriform, ovate, elliptical ovate to elongate ovate.

COLORATION.

Mr. Burns describes the eggs as "greenish-blue with very little variation;" one in a set of three is light blue. Mr. Ely says: "they are of a uniform deep blue." Mr. Jacobs describes them as "a very light blue with greenish tinge." I have described a large number of eggs as "a uniform light nile-blue." Fully half of the Iowa eggs have a limy deposit when fresh.

PERIOD OF INCUBATION.

At Berwyn, Pa. and Grinnell, Iowa the bird lays each day and is fourteen days setting. In fair weather, the young leave the nest in about ten days, sometimes not for fourteen.

Were our report not restricted to the department of Oology, and should we not infringe upon the rights of the Melological Committee, we would be delighted to pause here to speak in words of highest praise of Wood Thrush's song. Of all the birds in the deep forest-land, he has no peer. His song is suited

to the dusky solitude, awaking the softened echoes which speak and speak again to the leaves, the trees, the brooks and rills, finding their way even to the listening ear of him who wanders by. His is a "gush of molten melody" not too timid, yet not bold. He stands not on a house-top, inviting all to look and see, but sits in retirement, singing only to his mate, because he cannot help but sing.

Stay with us now and thy music impart,
  Touching the tenderest chords of the heart.
Send us thy clear, bell-like music again
  Out from the depths of the dark wooded glen.
Cheer us when dreary or gloomy the day,
  For then is the time of thy happiest lay.

American Robin, *Merula migratoria.*

SITUATION OF NEST.

Robin nests anywhere above ground beneath the Sun. I have sometimes diligently scanned the horns of the Moon with a field glass, thinking some enterprising Robin might have built his nest within. He has preferences, however, and they are for large trees and buildings. In the city, shade trees along streets are the favorite ones; in the country, shade trees along the roads are most often used, but many nests are built in the trees around the houses In Iowa the osage-orange hedges are much resorted to in company with Brown Thrasher.

Mr. Burns found one nest on the ground half way up a railroad bank. Mr. Jacobs has found nests on ledges of rocks. Mr. Ely says they are never on the ground and Mr. Strong and myself have never found them there. I have found nests under bridges, in pump-stocks, on rafters in barns, in ornamental vines within a foot of a window and even in eave troughs.

Mr. Burns says, "out of 49 nests, 30 were placed close to the main stem, 8 out on branches, 10 in buildings and one on the ground; only 2 were in thickets. All concur in this proportion.

Robin makes his nest anywhere from on the ground to 50 or even 60 feet up, commonly about 10 or 12 feet.

COMPOSITION OF NEST.

The nest is made of dead grass plastered together with mud, always lined with dry grass of a light color; the grass very rarely hides the mud. Weed stalks, rags, rootlets, paper, corn-husks, or even small twigs may find their way into exterior of nest occasionally. Mr. Ely has found nests with a few horse hairs for lining. Robin's nests may be distinguished by the absence of rootlets and the presence of grass in the lining. In Iowa, where Wood Thrush uses punk instead of mud, the mud also distinguishes the nest of Robin.

DIMENSIONS AND WEIGHT OF NEST.

	DIAM.		DEPTH.		
	Outside.	Inside.	Outside.	Inside.	Weight.
Berwyn, Pa.	5.00 to 6.00	3.50 to 4.00	3.00 to 4.00	2.00 to 2.50	5-8 oz
Columbia, Pa.	3.50	2.75	4.00	2.50	1 lb.
Grinnell, Iowa.	5.00 to 6.50	3.50 to 4.25	3.00 to 4.25	2.00 to 2.40	

The nest is too compactly made to vary much in size.

	DATE OF NESTING.				ARRIVAL.	
	First.	Last.	Av.	Time Building.	First.	Common.
Berwyn, Pa.	5-1	6-26	5-24		2-12	
Columbia, Pa.	4-26	7-10				
Perrineville, N. J.	3-28	8-20	4-10	5 days	3-1	
Wauwatosa, Wis.	4-15	7-15				
Grinnell, Iowa.	4-26	7-3	May	6 days	2-12	3-20

	EGGS IN SET.			MEASUREMENTS.		
	Largest.	Smallest.	Av.	Largest	Smallest.	Average.
Berwyn, Pa.	5	2	4	1.10x.83	1.06x.76	1.08x.79
Perrineville, N. J.			4			1.18x.81
Pittsburgh, Pa.	5	3	4	1.12x.84	1.08x.80	1.10x.82
Wauwatosa, Wis.	6	3	4	1.20x.84	1.07x.80	1.13x.82
Grinnell, Iowa.	5	2	4	1.19x.90	1.07x.80	1.13x.82

The variation in average dimensions is very great—.10x.2—this time. Our professional fathers show a variation of but .3x.3, which is pretty close. We ought to do better next time.

COLORATION.

Eggs of Robin are subject to but very slight variation in color. They are usually plain greenish, blue, or light nile blue, sometimes greenish-gray; not rarely spotted sparingly with warm-brown. Eggs vary from simple ovate to elongate-ovate.

PERIOD OF INCUBATION.

Robin lays each day unless hindered by storm and sets 14 days; in 12 to 14 days the young leave the nest.

Of Robin we can say nothing new. He is everywhere and known to everyone. His voice is the sweetest when it is the first in Spring, to awaken slumbering nature. With it we associate the silent voice of the starting sap, the melting snows and the return of the gaities of the new, fresh Spring. His voice is seldom heard after nesting begins.

The Committee had in mind many questions to be answered respecting nidification and oology, among which are the following:

1. Do eggs of the same species differ in any way in different localities, or at different seasons or in different sorts of weather?

2. Does the time occupied in laying or the period of incubation differ in different localities, or at different seasons?

3. Does the time occupied in building, or the material used, differ at different seasons or in different localities?

4. Does the time of year affect the position of the nest with respect to the Sun?

The question arises: How many of those questions are answered in the foregoing report? With regard to the first question I would say that it might easily be answered by a little painstaking labor. Mr. Burns is the only one whose notes are full enough to warrant me in taking his average of the size of eggs as the average of his own locality, the others are too general to be of use in this report. It will be seen by comparing Mr. Burns's work with my own that there is no constancy of variation; one species may show a larger average for Iowa and another a larger for Pennsylvania; hence no rule can be established. It is true, however, even though the reports throw no light upon the subject that the smallest eggs come from the south, gradually growing larger with every advance northward, with the most northern the largest. That there should be some variation east and west is, to my mind, highly probable, though the variations would be less. In working upon this line of investigation, notes east and west, should be studied and compared with the isothermal always in mind. North and south are not in nearness or remoteness to the poles, but in temperature, where the birds are concerned.

There is one thing more which may and probably does effect the size of eggs in a set: the size of the set. Where only a few are laid we would expect them to be larger and *vice versa* in larger sets. Thus, in future reports, full notes should be sent in, giving each set with its measurements by itself, with the date and number of eggs in the set.

The third question is answered affirmatively. Nests do differ, both in materials used and in time in building, in different localities, if not at different seasons. This is seen in case of Wood Thrush and Catbird especially; it is true in a less measure of the others.

The second and fourth questions are still open as before. On general principles we would say that the period of incubation would probably differ somewhat at different seasons. The cold causing a greater length of time for the development of the chick than the warmer air of later Spring.

SUPPLEMENTARY REPORT.

Bluebird, *Sialia sialis.*

This is another of our birds which cares very little for the location of its nest. It is almost as frequently found in deep woods as elsewhere. Posts, bird-boxes, natural cavities in trees, old boots, pumps; in fact almost anywhere he can find a hole large enough, Bluebird is content to rear his young. One enterprising pair began making a nest in the sleeve of a wood-chopper's coat which hung upon a post.

Bluebird lays from three to six eggs, usually five, very often four. It lays daily and is twelve days hatching the eggs. The young are able to leave the nest in about fourteen days.

The time occupied in making the slight nest of straw, grass and feathers is very variable; sometimes only a day or two, sometimes a week or more, according to the weather; but the actual time needed is very short. In Iowa Bluebird makes two broods; the first by the middle of April, the last about the middle of June. Thus, the period of nesting begins April 1st., and lasts well into July. Mr. Burns makes the latest record June 11 and Mr. Strong, Aug. 30.

The eggs are light-blue in color, sometimes almost white, and and average .83x.64.

The following are from Mr. Strong alone.

Am. Redstart, *Setophaga ruticilla.*

Nest is placed in crotch of saplings or forks of lower limbs of large trees. Made of wood fibres, fine rootlets, and horse hair. It nests in June and July, laying 2 to 5, usually 3 or 4 eggs. Bad weather greatly influences the nesting of this bird. It frequents young groves and thin woods along streams.

Yellow Warbler, *Dendroica æstiva.*

Nest placed in bushes or small saplings, 6 to 15 feet up. It is made of wood fibres and cottony substances, thicker and more bulky than the Redstart's. Eggs in a set 3 to 5, usually 4, rarely 5. Eggs are laid from May 10, to July and measure .62 to .71x.45 to .53.

REPORT OF WILLARD N. CLUTE, BINGHAMTON, N. Y.

The following is a list of all the warblers I have noted in this locality. It is not intended for anything like a complete list, as new members of this interesting family are being identified each year.

BLACK AND WHITE CREEPER, *Mniotilta varia.*

Common in Spring and Fall in deep woods. Unlike the other warblers it is found running up the tree trunks. They nearly all disappear in Summer, but as one is occasionally seen in July and August, they probably breed sparingly here.

CAPE MAY WARBLER, *Dendroica tigrina.*

Often seen in Spring and Fall. They prefer dry, open woods and do not breed with us.

SUMMER YELLOW BIRD; WILLOW WREN, *Dendroica æstiva.*

A common Summer resident in the willows and alders along water, also, in the orchard. The nest is placed in the forks of a tree, seldom at a height of more than fifteen feet. Exteriorly it is usually composed of strips of bark from weeds, especially of the milk-weed and lined with fine grasses and the cottony substance from the willow catkins. The eggs are generally 4 or 5, greyish or greenish-white, blotched and spotted with different shades of brown, chiefly at the larger end. At least two broods are raised in a season here. The Cow Bunting is this bird's greatest trial. As is well known, the Yellow Warbler is one of few birds that can distinguish the Cow Bunting's eggs from its own and refuses to hatch them. Instead of deserting the nest, she builds the offending egg out, often making a nest of several stories in her attempts to be rid of the parasitic egg.

BLACK-THROATED BLUE WARBLER, *Dendroica cærulescens.*

Seen only in the Spring and Fall. The number of these birds varies with the years. They are never more than tolerably common. Damp woods seem to be preferred, the birds keeping in the "lower story."

BLACK AND YELLOW WARBLER, *Dendroica maculosa.*

Spring and Fall migrant; never very plenty. Found in the tops of the alders and hornbeams that fringe the streams.

CHESTNUT-SIDED WARBLER, *Dendroica pensylvanica.*

Noted for the first time in the Spring of 1890 when it was common, frequenting open, deciduous woods. Late in June it was heard in full song in an upland grove and may yet be found to breed here.

BAY-BREASTED WARBLER, *Dendroica castanea.*

Seen only in Spring and Fall. Rarer than the preceding. It frequents the same growths, keeping perhaps a little higher up in the trees.

YELLOW-RUMP WARBLER; MYRTLE BIRD, *Dendroica coronata.*

A very common Spring and Fall migrant, found in open, deciduous woods. It is generally in full song when it arrives in Spring.

BLACKBURNIAN WARBLER, *Dendroica blackburniæ.*

Tolerably common migrant in deciduous woods.

BLACK-THROATED GREEN WARBLER, *Dendroica virens.*

The commonest of our Warblers, equaling the Summer Yellow Bird in numbers, though their habitats do not overlap; the Green Warbler being found only in the thickly wooded ravines and the retired upland woods, where its drawling note is heard all day long. I have never found its nest.

BLUE YELLOW-BACKED WARBLER, *Compsothlypis americana.*

Somewhat rare migrant, found usually in hemlock woods.

GOLDEN CROWNED THRUSH; OVEN BIRD, *Siurus aurocapillus.*

Common Summer resident, inhabiting the larger tracts of woodland, whether on the hillside or in the valley. It is one of the ground warblers and is usually found low down in the trees or on the ground.

MOURNING WARBLER, *Geothlypis philadelphia.*

A not uncommon migrant. Found in deciduous woods.

MARYLAND YELLOW THROAT, *Geothlypis trichas.*

Common Summer resident along swamps and creeks and in wet woods. It keeps well to the ground and nests in a bush on the ground.

YELLOW-BREASTED CHAT, *Icteria virens.*

Somewhat rare Summer resident, frequenting the bushes along water. The nest is placed rather low, usually in a little bush. The bird is very shy and I have known it to break its eggs when they had been handled.

AMERICAN REDSTART; DWARF ORIOLE, *Setophaga ruticilla.*

A not uncommon Summer resident in the deepest woods. During migrations, the birds often appear in the trees along the streets.

NESTING OF THE WOOD AND WILSON'S THRUSHES.

C. S. BUTTERS, HAVERHILL, MASS.

Until this season have always had more or less trouble in finding the nests and eggs of the Wood Thrush. I have this season, however, made a special study of the nesting habits of the Wood Thrush and Wilson's Thrush with very good success.

The Wilson Thrush is quite a common breeder in this locality and I have found something like fifteen sets this year, but have taken but one, which I have in my cabinet. I do not think it necessary to collect twenty-five to thirty sets of a certain species eggs to be able to study them, but believe they can be studied to a certain extent in the field, without disturbing the nest or eggs.

Nearly all of the sets noticed were built near the ground; most of them in a small growth of oak and maple. Some were placed in a dead bush about 12 feet from the ground; others on the ground at the foot of a bush. None of the nests found were over 18 feet from the ground.

The bird, when approached, would quietly slide off the nest and keep out of the way, as long as I was near, returning as soon as I left.

The number of eggs in each, with one exception, was four. The one exceptional set contained three, incubation commenced. The average size of the eggs is .86x62.

The nest before me is a fair sample. It is built of oak leaves, grasses and bark, lined with black rootlets. The outside diameter is 5 1-2 inches by 3 1-2 inches in depth. The inside diameter is 3 inches, with a depth of 1 3-4 inches. It is well put together and looks as if it were built for service.

It is my experience that the Cow Bunting does not deposit its eggs in the nests of the Wilson's Thrush.

Have never been able to find the nest of the Wood Thrush until this season. Passing through a small piece of woods last June, I saw a nest that appeared to be nailed to the trunk of a tree, about 8 feet up. On closer inspection, found nest supported by some small twigs growing from trunk.

I went up to investigate the nest and the birds flew about making quite a fuss. The nest contained four eggs.

The birds acted far different than the Wilson's Thrush, being full of fight and flying to within a few feet of my head and then shooting off in another direction. I had a good chance to observe them.

In the same piece of woods, inside of two hours, I found three more nests of the same species. Were all placed in the same position, against the trunk of a tree, respectively 5, 8 and 12 feet from the ground. Each nest contained four eggs, averaging .99x.74.

The outside of the nest is composed of dried leaves, stems, some pieces of newspaper, and an old snake skin; then comes a thin shell of rotten wood, reaching to the top of the nest. It is then very sparingly lined with fine black roots. The outside measurements are 5 inches in diameter and 2 1-2 inches deep. Inside diameter 3 1-4 inches by 1 3-4 inches in depth. This is a fair sample of all the nests examined.

I find fully as much to study in the nests as in the eggs and think that more interest should be taken in the study of nests, than is at present done.

COLLECTING IN THE COLORADO DESERT.

F. T. PEMBER, GRANVILLE, N. Y.

The Colorado Desert takes its name from the Colorado River, which bounds it on the east. It includes a vast section of south-eastern California and extends into Mexico.

Its central portion is a great basin, or depression, almost 300 feet below the level of the ocean, with extensive beds of salt, hot springs, a blinding reflection of the sun from fields of alkali and a daily mirage.

Other sections are barren hills of volcanic rock, destitute of water; mountains and valleys of drifting sand and where the wind blows through the passes in the hills, it fills the air, cutting the face like a knife and making it almost impossible to travel at all. Many sections are entirely destitute of vegitation, while other parts have a scant growth of grease-wood, mesquite, palo verde, cactus and dwarfed bushes.

To the northeast, rise the mountains of San Bernardino and Grayback, some 13,000 feet high and crowned with perpetual snow, while to the southwest, San Jacinto looms up in the clear air to a height of 11,000 feet and is also enveloped in snowy beauty nearly all the year.

Cool streams of water from these mountains flow into the desert, soon loosing themselves in the sands.

Around the mountain bases and among the foothills there is more vegitation, and bird life becomes more abundant than one would suppose. In some of the mountain canons are extensive groves of fan palms, whose smooth symetrical trunks and leafy tops, rise to a height of 70 to 90 feet, making a home for many birds.

I have crossed this desert six times and made two extra journeys into it, collecting many of its birds, but have not been there enough to find them all.

A characteristic bird of the most barren and desolate part of the desert, is the American or White-necked Raven, which abounds through the Winter season. They seem to be in pairs, walking about over the alkaline plains, though what they are there for, or what they find to eat, is to me a mystery.

In the northwestern part of this region, where the Winter rains

start a new growth of wild flowers and grasses, great flocks of Sand Hill Cranes feed daily and then fly away towards the ocean. Thousands of the Snow Goose, White-fronted Goose, White-cheeked Goose and Cackling Goose, also feed in the same localities on the borders of this desert. The flocks usually come before daylight and return about 10 o'clock, to San Jacinto and Elsinore Lakes, which are over the hills to the southwest. Egrets and Great Blue Herons are also often seen.

Of small birds the Black-throated Sparrows are very abundant wherever they find a few bushes and I saw young birds able to fly and also found fresh eggs from April 20th to 30th of last Spring.

Yellow-headed Tits were rather common and I found several of their cocoanut-shaped nests. Costa's, Anna's, Rufus and Black-chinned Hummingbirds were numerous and while part of the nests held eggs, others had full grown young.

The Western Red-tail, Swainson's, Sparrow and Ferruginous Rough-leg Hawks were seen, as were also Short-eared, Barn and some species of Pigmy Owl, but could not find their eggs.

Among the palms in the canons, Bullock's and Arizona Hooded Orioles were nesting in numbers and eggs and skins of the House Finch, Western Tanager and both Lawrence's and Arkansas Goldfinch were secured. Gambels Quail were by no means scarce and those taken were of a paler type than my Arizona specimens. Up towards the pines, or San Jacinto, Mountain Quail and California Jays are abundant. Where the mountain streams flow onto the plain, near Palm Springs, I found a large flock of Yellow-headed Blackbirds, with a few Brewer's Blackbirds keeping them company.

Here also were Coots, several White-faced Glossy Ibis, a pair of Cinnamon Teal and some Sora Rail. The Indian boys brought me several of the last that they had killed with arrows.

Warblers of several species were taken including the western representative of our Yellow Warbler. Black-crested and Ash-throated Flycatchers were seen every day, with an occasional Western Lark Finch and California Bluebird.

I also found many nests of the Cactus Wren, which abounds wherever certain species of cactus grows. Blue-headed Gnat-

catchers were rather common, though I only found one nest with five fresh eggs. Blue-grey Gnatcatchers were also nesting. Black-headed and Western Blue Grosbeaks, as well as Lazuli Buntings were added to my collection.

Among the palms I shot several Nuttall's Woodpeckers, but failed to secure their eggs. Texan Nighthawks seem to find this a congenial home and I saw Killdeer Plover several miles from the nearest water. I shot one Crissal Thrasher and saw one California Vulture, sailing along the base of San Jacinto.

To procure specimens of two species of birds, with their eggs, was a great inducement to me, to visit this region of sand and desolation. They were the Poorwill and Leconte's Thrasher. The former I could hear every evening and they seemed numerous, but the eggs, or even the birds, by daylight, are difficult to find. I have spent days looking among the cactus and stunted bushes, or on the rocky hillsides, with the thermometer ranging from 90 to 110 in the shade and with all the Indian help I could get and only succeeded in finding three sets of two eggs each and one pair of very young birds.

They seem to lay almost anywhere, in the slightest hollows—without nests—and are very close setters, so that it is very difficult to flush the birds. My experience leads me to the belief that the egg will be very rare for a long time and who ever looks for them where I have, will find two rattlesnakes to one egg.

Nests of the Leconte's Thrasher are not hard to find, if one gets where the birds are, as they are bulky and not very well concealed, though in the thorny mesquite, it is often all one can do to get at them. I took several sets last Spring and some on a former visit to the same section. These sets were of two, three and four eggs. I think three may be the most common number and that full sets of two occur as often as those of four.

I have found them from three to eight feet above the ground in mesquite, cactus, palo verde and other small trees and bushes.

These are some of the common birds of the desert country, but no doubt, many rare ones may be found. Collecting there has its hardships as well as pleasures. It is extremely hot and dusty; a dazzling, blinding glare to the sunlight as reflected from sand, rock or alkali; scarcity of water in most places; sand

storms that are worse than a Dakota blizzard, with a soil into which you are sinking ankle deep at every step, or scrambling over jagged, volcanic rocks. These are a few, but not all of its discomforts.

MARSH COLLECTING IN THE VICINITY OF OSWEGO, NEW YORK.

DANBURY, CONN., Feb. 4, 1891

During the past season, 1890, I have confined myself almost exclusively to marsh collecting and although it was hard and tiresome work, the results were very gratifying indeed.

About five miles from Oswego, N. Y., is a level swamp meadow, containing 100 acres or more, grown over with tall, wild grass, cat's-tails, etc. and dotted here and there with clumps of willows and wild rose bushes

Several hummocks covered with rocks and bushes, rise a few feet above the surrounding flat. Through it flows a creek of considerable size that overflows the entire meadow in Spring and Fall. On one side it is bounded by pastures and upland meadows, on the other sides by woodland.

May 24, 1890, I made my initial trip to this place in quest of duck's nests. Upon arriving there, I found the whole meadow covered with water from one and one-half to two feet deep. Divesting ourselves of unnecessary clothing and trappings, we waded in to the nearest hummock. As soon as we showed ourselves on top of the hummock, the ducks began to rise—Wood Ducks, Blue-winged Teal, Mallards and Black Mallards. Occasionally a Bittern, Green Heron, or a Great Blue Heron would take wing, while from the surrounding bushes and grass, could be heard call notes of the Sora and Virginia Rails and the song of countless Long-billed Marsh Wrens and two or three Coots were detected as they sought a more secure retreat in a dense growth of flags.

What a sight for a collector, who, in years gone by had devoted himself to fields and woods! What a thrill wobbled o'er the oological side of my "think tank," as I gazed upon this new field of bird life!

Without more ado we waded in. The first find was a ditch, waist deep. Ugh! The water was chilly. A few steps farther brought me to a nest containing three eggs of the Virginia Rail that had been flooded.

During the day we found a number of nests that were deserted on account of high water.

A short distance from this a Sora's nest was found, with five fresh eggs. It was made entirely of dead grass, and fourteen inches above the water in a wild rose bush. Two rods to the left in a small clump of willows, close to the creek, I found a nest with six fresh eggs of the Coot. The nest was a low heap of dried cat's-tail drawn together without much order of arrangement, the eggs resting in a shallow depression.

Six and three-quarter's hours of steady tramping, disclosed a large number of Sora's nests with uncompleted sets, and empty nests of the Marsh Wren, but not a single duck's nest.

From this day's work I learned not to wear a pair of new rubber boots while wading in mud and water. A pair of leaky shoes—more holes than shoe—is the proper kind of foot gear.

June 1st found us again at this meadow. The water was much lower than at the time of our previous visit. Five and a half hours of wading brought us as many sets of Sora's eggs as we desired. The largest set was fourteen, the smallest seven.

The smaller sets were fresh, or else evenly incubated, while the larger sets were in all stages: some fresh, others very far advanced.

Secured one set of Am. Bittern, four fresh eggs. One set of Long-billed Marsh Wren and two incomplete sets.

While wading in the woods at one end of the meadow, I noticed broken shells of ducks eggs near the foot of a soft maple. Looking through the top of the tree I could see a dead limb broken off about three feet from the trunk. My climber went up and reported that the cavity in the limb was about two feet deep, showed long use and contained nearly a hat-full of fresh duck feathers. In the bottom of the hole was a small quantity of old, decayed feathers. Next year that tree will bear the epitaph of a set of Wood Duck's eggs that have gone to their long repose, beside a set of purchased ones in a drawer in one of my cabinets.

On my way home I collected a set of five fresh eggs of the Blue-winged Teal. About half a mile from the scene of my day's work is a small vineyard, of perhaps, one-fourth of an acre, on quite a steep hillside, sloping to the creek. The owner while plowing the vineyard found the nest and, upon my arrival, had them under a setting hen. "Goin' to hatch 'em jest for the curiosity of it," he said. With the aid of a half dollar I soon convinced him that I would deem them a greater curiosity to have them unhatched. The eggs were laid on the ground, in grass about eight inches high and only twelve rods from the owner's house and barn. Directly across the creek from this nest, another one with nine eggs was found, but I did not know of it in time to get the eggs.

June 15th, I again visited the meadow and found sets of fresh eggs of the Marsh Wren, Swamp Sparrow, Sora Rail, Least Bittern and a deserted nest of nine eggs of the Coot, nearly fresh. Four of the eggs had been broken, which was probably the cause of the desertation.

June 22d, I visited Lake Neahtawanta, about twelve miles from here. This lake is a clean sheet of water, containing several hundred acres. Two sides of it are swampy and grown overwith tall grass, cat's-tails, willows and low bushes. Under a scorching sun it was hard work pushing a boat through this; at least my boatman thought so.

This trip enriched my collection with several sets of Least Bittern, Virginia Rail, Red-winged Blackbird—one egg being a runt .55x.43—and one set seven Florida Gallinule.

[ED.

THE BLACK SNOWBIRD.

(*Junco hyemalis.*)

WILLARD N. CLUTE, BINGHAMTON, N. Y.

In this part of southern New York, the Black Snowbird does not winter and is therefore seen only for a brief period, while going to their breeding grounds in the Spring and returning in the Fall.

They arrive from the north about the last week in September

and soon become common in the weed growths along old fences. It is like meeting old friends, to see their familiar forms flitting along the roadsides again and coming at this season, when the year is dying and other birds leaving us, they are doubly welcome.

If Burrough's Bluebird, with the hue of the sky upon his back and that of the earth upon his breast, stands for Spring; then the Snowbird may well stand for the opposite season, Autum; when his plumage matches the lead-grey sky above and the frosty earth beneath and the tail edged with white, hints of the coming snow.

The Snowbird seldom stays with us after the middle of December. At the first snow storm he and his merry companions are off for the south to be seen no more until Spring. Yet they are not always so afraid of cold weather, for I have seen them all Winter along the west branch of the Susquehanna River. They remained in the fields until pressed by the severe cold and then gathered about the house and barn in company with the flocks of English Sparrows.

During the last week in March, the Snowbirds appear from the south. They are generally but little behind the Song Sparrows and often in company with them. When they arrive they are usually found in the tops of pines, but soon become common in the "slashings" and the edges of the woods. At this season they often feed in company with their near relations, the Tree Sparrows, and migrate with them.

That this is one of the most common of American birds, may be inferred from the area covered in their migrations. This extends, according to Wilson, from the Artic circle to the Gulf of Mexico, and from the Atlantic Ocean to the Mississippi Valley. On a journey from northern Maine to Georgia, a distance, as he travelled, of eighteen hundred miles, he found the Snowbird abundant all the way and says, "I cannot but consider this bird as the most numerous of its tribe of any within the United States."

When the birds arrive from the north, they have but a single call note—a smacking chip, like the twang of a bow-string. In the absence of other bird voices the chipping of a company of

these birds, is not unmusical. In the Spring, in addition to their call-note, they have a thrill, resembling that of the Chipping Sparrow, though rather more liquid and musical. The birds are said to have yet another and rarer song, "a faint whispering warble." This is doubtless the bird's love song, which he feels prompted to utter, only when near his Summer home. I suspect we are too far south to hear it.

Some authors maintain that these birds are wary and hard to trap, but my experience is that they are not. When a small lad I often caught them for amusement, letting them go again as soon as caught. They are easily taken by a box held up by a short stick and baited with bread crumbs, the stick being pulled from under the box at the right moment by means of a long string. One Winter's day I caught a whole flock that had made a rendezvous of a haymow. They had access to the place through an open door and when the birds were busily feeding, the door was pulled shut, making them prisoners.

A pair of Snowbirds which were caught and kept all Winter in a large cage, soon became quite tame, but never so fearless as a pair of English Sparrows in an adjoining cage, which were caught at the same time.

The birds ate anything that canaries would and were also fond of bread and milk. In the Spring they became restless and on being liberated, lost no time in joining their friends in the fields.

While most of these birds go beyond the limits of the United States to breed, there are a few that nest within our limits. They commonly breed in the Adirondacks, White Mountains and occasionally in the mountain ranges as far south as the Carolinas. Wilson thought, "there must be something in the blood or constitution of this bird, which unfits it for residing, during the Summer, in the lower parts of the United States. However, he found them abundant in the breeding season about the head waters of the west branch of the Susquehanna and several nests have been found in New York since, in latitude 42.

The nest is usually concealed in a hollow beneath an overhanging bank and is composed of fine grasses, leaves, weed-stalks and pine needles, lined with the hair of cows, horses and other animals.

The eggs are generally four in number, greenish or greyish white, and thinly sprinkled all over with spots of reddish-brown and lilac, thickest at the larger end. Two broods are reared in a season.

In parts of New England, Wilson found the idea prevalent that the Snowbirds turned to Chipping Sparrows in the Summer, the similarity of their song doubtless aiding the belief. It was often a hard task to convince people of their mistake. This idea is akin to the old belief that Swallows turned to frogs in Winter and Chimney Swifts to Snowbuntings.

SOME BIRDS OF THE BLUE MOUNTAINS, PA.

HARRY K. JAMESON, PHILADELPHIA PA.

Although it is somewhat of a disappointment to an oologist to encounter a rare nest for the first time and find it occupied by fledgelings, I do not think any of us have wished that we had overlooked such a nest and so avoided the feeling of having lost something of value.

Of course, the enthusiast cannot but regret that he is too late for a coveted set of eggs; but to me the disappointment is not great. To note the actions of an unfamiliar species at its nest, the notes it utters there, whether calls to its young or cries of alarm on the approach of an enemy, are all, to me, deeply interesting and pleasing.

On July Fourth 1890, I was toiling up Mt. Minsi, on the side of the Delaware Water Gap; stopping now and then to take in the actions of a bird, or the grandeur of the scenery. The side of the mountain is thickly covered with deciduous trees and I noticed such birds as the Red-eyed Vireo, Ovenbird, one Black and White Warbler. This last evidently had a nest close by, for I saw it catch a small white moth and fly off with it through the woods.

After climbing upward for an hour, I had not attained the top of the mountain and feeling too warm and tired to go higher, I began to descend. At a point which I judged to be from eight hundred to a thousand feet above the river, an unfamiliar bird-

note attracted my attention and looking aronnd, I saw a Vireo darting about a short distance from me. Focusing my opera glass upon it, I noted that it was of the Solitary species. This being the first time the bird had come under my notice, I stopped to take a view of its actions. After watching it a few moments as it flew from tree to tree, I saw it catch a small moth and for a while it held the insect in its mouth, hopping about uneasily, seeming to regard me with suspicion. Finally it flew off a short distance. I followed it, carefully examining the trees near it, for I was now convinced that it had a nest near by, either with a brooding mate or hungry young. I discovered the nest before the bird appoached it. It was in a hickory tree, suspended from a branch as usual, not more than a foot from the trunk and about seven feet from the ground. The branch was a slender one and grew at an upward angle from the trunk.

Upon examining the nest, I found that it held three or four well-fledged young, that filled the little structure to its utmost capacity. The old bird in the meantime was showing great concern, uttering its notes of alarm and boldly approaching to within four or five feet of my face, as I was looking into the nest. Judging from the age of the young birds that appeared to be ten or twelve days, the full set of eggs had been deposited in this nest by the eighth or tenth of June.

I stopped but a few hours at the Water Gap and the only other occupied nest I noticed, was that of a Wood Pewee. It was on a horizontal branch of a young oak tree, about twenty feet from the ground. I was passing by the tree, keeping a sharp lookout for nests, when I discovered the bird on this nest. Upon climbing up I could see the two eggs in the nest and I wished to take them as a memento of my visit. The branch was too slender to allow my going out to the nest, but by dividing my weight between it and another branch above, to which I held on by one hand, I was enabled to get within two feet of the nest, but could not get an inch nearer. As it was, the branch was bent down, so that the eggs were in danger of being thrown out of the shallow nest. A long stick was cut, one end sharpened and I attempted to push it through the nest and lift it from its position. The nest was too frail; the materials parted and the eggs drop-

ped and were destroyed. I examined the broken eggs and found that they contained well developed embryos.

Late in the afternoon I took a train for Tobyhanna Mills, a village on top of Mt. Pocono, thirty miles northwest of the Water Gap. The elevation at this point is 2,200 feet, and during the two days that I remained there, I saw at least two species belonging to the Canadian fauna—the Slate-colored Junco and the Canadian Warbler. A pair of the latter evidently had a nest near where I passed, in a small swampy wood. In passing through this wood, I had to step from one fallen tree to another, there being several inches of water over all. The numerous roots of fallen trees are doubtless used as nesting places by this Warbler.

The Chestnut-sided Warbler, is also quite common here, and was met with in low undergrowth, which here covers the whole country. Two Cedar Waxwings nests on young pine trees, held one and four eggs respectively. Two nests of Field Sparrow on low bushes a few inches above the ground, held eggs: one, four fresh ones, the other three just hatching.

My collection is none the richer for that mountain visit; the tin collecting box, containing the set of Waxwings and Field Sparrow, having dropped unnoticed from my coat pocket as I was passing through the thick undergrowth.

THE KILLDEER.

(*Aegialites vociferus.*)

WALTER A. LYNN, GLADBROOK, IOWA.

These birds usually arrive in Iowa during the last week in March or the first week of April. Their arrival is heralded by their clear piercing cry of "killdee," "killdee," often followed by the last syllable repeated many times rapidly.

The nest is on low ground, consists merely of a hollow, lined with dry grasses; eggs four, greyish speckled. The eggs are arranged in the nest in accordance with the usual custom of the snipe family—the small ends pointing to the centre of the nest.

On a close-cropped hill near my home, many pairs reside every Summer. They seem to like the hot southern slope of

the hill, where hours are spent sunning and dusting themselves and more hours in splashing and bathing themselves in the warm water at the base of the hill and in seeking insects, and drying their pretty plumage along the bank.

The young leave the nest when a day old and follow the parents—the male and female seeming to take equal shares in the care of them. The young are very swift of foot and when pursued, run and double on their track with exceeding dexterity, making their capture quite a difficult undertaking.

In beauty young Killdeers can scarcely be excelled; the contrasting colors and bold markings of the black, white and grey, giving them a striking as well as pretty appearance.

When caught, their soft mild expression and tremulous voice is of such a nature, that few can resist their appeals for liberty. They look so pretty and so innocently helpless, that it would be a hardened person who could harm them.

The parent birds are very suspicious, uttering their shrill cries and feigning to be wing-broken and leg-broken, on even a distant approach to their nests or young. Cattle or sheep they do not fear.

I once saw a striped ground squirrel attempt to seize a young Killdeer, but the old birds dashed at the squirrel, drew his attention to themselves, while the little one made good use of its ungainly legs and was soon out of danger.

EDITORIAL.

In assuming the duties which devolve upon your newly elected president, I find that not the least arduous of these and yet one in which I shall always be greatly interested and undertake with much pleasure, is that of editing that department of the Semi-Annual which is devoted to our organization.

The field is a new one to me and would be entered with no little hesitation, did I not feel assured that you, who have raised me to this position, will stand by me and make the interest of the magazine your own.

I enter upon my duties with no qualifications, unless an earnest and thoughtful interest in our organization and the honorable service as your secretary, can be called such.

It is proposed to fill a large portion of the space allotted to us with reports of members and committees, and fresh and new notes from the field. It therefore rests with you, fellow workers, of how great value this space, which is your own, shall be to you.

Will you not, by sending in such notes, show a real, live interest in making our department tell of the freshness of the fields and woods and cheer us with the brightness of the sunlight?

LYNDS JONES.

*** *** ***

The Semi-Annual hereafter, will be made more particularly the organ of the Wilson Ornithological Chapter of the A. A. Each member of the Chapter should send notes and endeavor to make each issue brighter and more interesting.

Members of Committees should endeavor to make their reports very replete and exhaustive. Each subject given out by Chairmen of Committees, should be thoroughly worked and fully written up. No stone should be left unturned that will add to the value of the different reports. The only possible way in which this work can be rightly and fully prepared, is for each member who has a part of the work assigned him, to push it forward conscientiously and exhaustively.

Chairmen of Committees can do nothing without aid and this aid must come from the scattered members. In this manner a

large territory will be covered and the reports will be made of value. This will be more especially the case with the work in charge of the General Committee. The slips sent out by this department, should be prepared under the headings given and a report made to the Chairman the first of September, 1891. These reports should not be prepared in a desultory, disjointed manner, but by connected, hearty, continued effort to get the facts in each case.

The funds of the Chapter are in the hands of President Jones, who already has all he can attend to, considering his added duties in connection with the editorial department of the Semi-Annual. Of course, the Chapter is not yet large enough to make the handling of its funds a very burdensome affair, but it will undoubtedly grow. A treasurer should be elected to take charge of and keep the accounts of the Chapter.

The need of a meeting of the officers and members of the Chapter is apparent to all who desire to put it on a firm basis. The necessity of such a meeting has been mentioned by a number of the active workers of our Chapter and it is important to the future growth and standing of the organization, that this meeting be held as early as possible. If possible, the meeting should be held this present Summer, or as soon thereafter as can be conveniently arranged. Matters of importance to the Chapter cannot be arranged by correspondence.

Taking the homes of the active members as a basis for computation, Rochester, N. Y. seems to be the most centrally located for all. This decision is reached after a thorough investigation of the guide books of the different railroads and an actual computation of the distance to be traversed by each active member. Members of the Chapter in eastern states can readily reach that place via. New York or Albany on the Central Railroad. The good of our growing Chapter should be taken into consideration by all and they should attend, if the meeting is arranged for and they can possibly do so.

Will all members, active and associate, who can attend such a meeting, please write to the Editor or Publisher and state their preferences as to time and place of meeting?

Owing to delay caused by the transfer of the Semi-Annual

from its former owner, Mr. W. H. Foote, this number may possibly not be up to the standard in the way of frontispiece and illustrations to the O. & O. Semi-Annual. We ask the indulgence of our readers and assure them that the October number will be greatly superior to this April number, and it is proposed to give as a frontispiece of the October number, a hand-painted cut of some typical egg, or set of eggs.

PUBLISHER'S NOTES.

Under this head all papers and magazines sent us, will receive an honest review.

The Ornithologist & Oologist, Hyde Park, Mass. Frank B. Webster, Publisher. Monthly. 16 pages. $1 per year. This one is always the same: good.

The Ornithologist & Botanist, Binghamton, N. Y. Willard N. Clute, Editor. Joseph E. Blain, Publisher. Monthly. 8 pages and cover. 35 cents per year. This is one of the new ones: bright, well edited and well printed.

The Collector's Monthly, Danielsonville, Conn. C. H. Prince, Editor and Publisher. Monthly. 4 pages and cover. 30 cents per year. A well printed sheet.

The Wisconsin Naturalist, Chas. F. Carr, Publisher, Madison, Wis. 16 pages and cover. 50 cents per year.

We are sorry to note that Mr. Paul B. Haskell, of Ashland, Ky., has ceased publishing the American Osprey. We thought it had come to stay, but ——

The Empire State Exchange, Water Valley, N. Y., Edited and Published by U. S. Perrine. Monthly. 25 cents per year. Bro. Perrine should change printers and get one who can run a press. Aside from poor press work, good.

The Old Curiosity Shop, San Francisco, California. 4 pages. Monthly. 25 cents per year. Edited by A. McDonald, Box 1732, San Francisco, Cal.

EXCHANGE AND WANT DEPARTMENT.

WANTED—A small 38 calibre, collecting gun, such as is sold by F. H. Carpenter.
Will exchange an incomplete set of two eggs of the Acadian or Saw Whet Owl for it, if with tools. Address T. S., care of Publisher, this office.

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Will exchange advertising space in this magazine, or eggs, or pay cash. Must be cheap. Address this office.

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⁘ THE SEMI-ANNUAL. ⁘

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AMATEUR PUBLISHERS TAKE NOTICE:

A number of cuts that have been used in the back numbers of the O. & O. S. A. that are now on hand will be sold at 25 cents each. Some of these cut are copper plates, but the greater part are stereotypes. This is about one-quarter of the actua value of these cuts and Amateur Publishers should take this chance to get good cuts at far below their value. They are the work of the Syracuse Photo-Electric Engraving Co., of Syracuse, N. Y., who advertise elsewhere.

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393c.	Harris's Woodpecker,	.75
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554.	White Crowned Sparrow,	1.50
607.	Louisiana Tanager,	.60
629b.	Plumbeous Vireo,	.75
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Grasshopper Sparrow,	.20	Brown-headed Nuthatch,	.25
Bachman's Sparrow,	.75	&c., &c.	

BIRDS' EGGS.

	PER EGG		PER EGG
Turkey Vulture,	.40	Yellow-throated Warbler,	1.50
Black Vulture,	.40	Pine Warbler,	.40
Whippoorwill,	.80	La. Water Thrush,	.40
Ruby-throated Hummer,	.40	Brown-headed Nuthatch,	.25
Acadian Flycatcher,	.12	Carolina Chicadee,	.10
Rough-winged Swallow,	.20	Blue-gray Gnatcatcher,	.20

MAMMAL SKINS.

	PER SKIN		PER SKIN
American Otter,	$8.00	Ricefield Mouse,	.60
Mink,	2.00	Harvest Mouse,	.35
Bats—4 species,	.35	Cotton Rat,	.50
Shrews—2 species,	.35	Pine Mouse,	.50
Flying Squirrel,	.45	Opposum,	$3.50 to 4.50
Red Mouse,	.35	&c., &c.	

The above are some of the species that we usually have on hand, or can collect to order. Full data and measurements in all cases. Write for price list.

H. H. & C. S. Brimley,

TAXIDERMISTS AND COLLECTORS,

RALEIGH, N. C.